



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,678	06/25/2001	Thomas P. Glenn	G0064	9751

7590

06 03 2003

Serge J. Hodgson
Gunnison, McKay & Hodgson, L.L.P.
Suite 220
1900 Garden Road
Monterey, CA 93940

EXAMINER

DINH, TUAN T

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,678

Applicant(s)

GLENN ET AL.

Examiner

Tuan T Dinh

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-27 is/are pending in the application.
- 4a) Of the above claim(s) 6-8, 19, 20, 26 and 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-12, 14-16 and 25 is/are rejected.
- 7) ☐ Claim(s) 13 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, Specie I (claims 1-5, 9-17, 19-20, and 25-27) in Paper No. 4 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 19-20, and 26-27 do not read on specie I (figures 1-2) because they have limitations of "an optical component and transparent sealing material"; therefore, claims 19-20, and 26-27 are withdrawn from further consideration as being drawn to non-elected claims

Claims 18, and 28-32 are canceled without prejudice.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-4, 9-12, 14-16, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Pollack (U. S. Patent 6,534,711).

As to claim 1, Pollack discloses a package (100-figure 1) as shown in figures 1-9 comprising:

- a substrate (104, column 7, line 7) comprising:

- a pocket (114, column 7, lines 31-32);

- an overflow reservoir (chamber 112, column 7, line 31) around a periphery of said pocket; and

- a mating surface (a surface of a sidewall 108) around a periphery of said overflow reservoir (112);

- a first electronic component (IC 102, column 7, line 6) coupled within said pocket (114);

- a sealing encapsulant filling said pocket (column 7, lines 35-37), said sealing encapsulant comprising an exterior surface coplanar with said mating surface; and excess encapsulant within said overflow reservoir (see figures 1-3).

As to claim 2, Pollack discloses the package (100-900) as shown in figures 1-9 further comprising a second electronic component (figure 1A-122, 128) coupled within said pocket.

As to claim 3, Pollack discloses the package (100-900) as shown in figures 1-9 wherein said first electronic component is coupled within said pocket in a configuration

selected from the group consisting of a wire-bond configuration, a surface mount configuration and a flip chip configuration.

As to claim 4, Pollack discloses the package (100-900) as shown in figures 1-9 wherein said substrate further comprises: a pocket base surface; and a pocket sidewall surface, said pocket base surface and said pocket sidewall surface defining said pocket (104) (see figures 1B, 2B, 3, 4, 5B, 6B, 7, 8B, 9B, and 9D).

As to claim 9, Pollack discloses the package as shown in figures 1-9 wherein said sealing encapsulant comprises a cured flowable material (plastic material, column 7, lines 50-53, column 8, lines 15-25).

As to claim 10, Pollack discloses the package as shown in figures 1-9 wherein said exterior surface of said sealing encapsulant has a smoothness (see figure 1B having a smooth surface of an encapsulate material filled into a chamber 114) approximate equal to a smoothness of glass (column 7, lines 51-52).

As to claim 11, Pollack discloses the package as shown in figures 1-9 wherein said sealing encapsulant is opaque.

As to claim 12, Pollack discloses the package as show in figures 1-9 wherein said excess encapsulant is formed of a same material as said sealing encapsulant.

As to claims 14-16, Pollack discloses the package as shown in figures 1-9 wherein said substrate (104) further comprises: a pocket base surface and a pocket sidewall surface defining said pocket (114); a drain base surface, a drain inner sidewall surface, and a drain outer sidewall surface defining said overflow reservoir (112); and a runner surface (top surface of an inner sidewall 110) extending between said drain inner

sidewall surface and said pocket sidewall surface, or extending between said pocket and said overflow reservoir (see figures 1-3), and said mating surface extends from said drain outer sidewall surface (an outer sidewall of 108).

As to claims 25, Pollack discloses the package as shown in figures 1-9 comprising: a substrate (104) comprising a mating surface (top surface of 108) and a means for (chamber 114) containing an electronic component;

a means for (an encapsulant material, column 7, lines 35-36) protecting said electronic component filling said means for containing; and

a means for (the encapsulant material made of plastic or epoxy) preventing said mating surface from being contaminated by said means for protecting.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pollack ('711) in view of Wyland et al. (U. S. Patent 6,111,199).

As to claim 5, Pollack discloses all of the limitation of the claimed invention, except for a pin extending through said pocket base surface and through said substrate and protruding from a lower surface of said substrate; and a bond wire electrically coupling said bond pad to said pin.

Wyland teaches a package (100) comprising a substrate (104) having a pin (103) extending through said pocket base surface and through said substrate and protruding from a lower surface of said substrate (104, see figure 2B); and a bond wire (11) electrically coupling said bond pad (105) to said pin.

It would have been obvious to one having ordinary skill in the art at the time the invention was made teaching's Wyland to employ the package of Polack in order to provide an electrical connection to an external source of a conventional pin grid array package.

Allowable Subject Matter

6. Claims 13, 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Steffen, Polak et al., and Ooyama et al. disclose related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T Dinh whose telephone number is 703-306-5856. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone numbers

Application/Control Number: 09/891,678
Art Unit: 2827

Page 7

for the organization where this application or proceeding is assigned are 703-305-1341 for regular communications and 703-305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

TD
May 31, 2003



DAVID L. TALBOT
SUPERVISORY PATENT EXAMINER
TECHNICAL CENTER 2827